

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1           **Claim 1 (currently amended):** Work piece coated with  
2           a system of film layers comprising at least one ~~of which~~  
3           ~~is~~film composed of  $(Al_yCr_{1-y})X$ , where  $X = N, C, B, CN, BN,$   
4            $CBN, NO, CO, BO, CNO, BNO$  or  $CBNO$  and  $0.2 \leq y < 0.7$ , with  
5           the composition within said  $(Al_yCr_{1-y})X$  film being either  
6           essentially constant or varying over the thickness of the  
7            $(Al_yCr_{1-y})X$  film continually or in steps, said work piece  
8           constituting one of the following tools, specifically a  
9           milling tool ~~and in particular of~~ a hob, (spherical-head)  
10          ball nose mill, planar or profiling cutter, a clearing  
11          tool, reamer, (indexable tip) insert for turning and  
12          milling, a die or an injection mold.

1           **Claim 2 (currently amended):** Work piece coated with  
2           a system of film layers comprising at least one ~~of which~~  
3           ~~is~~film composed of  $(Al_yCr_{1-y})X$ , where  $X = N, C, B, CN, BN,$   
4            $CBN, NO, CO, BO, CNO, BNO$  or  $CBNO$  and  $0.2 \leq y < 0.7$ , with  
5           the composition within said  $(Al_yCr_{1-y})X$  film being either  
6           essentially constant or varying over the thickness of the  
7            $(Al_yCr_{1-y})X$  film continually or in steps, said work piece

8 constituting a machine component.

1           **Claim 3 (currently amended):** Machine component as  
2 in claim 2, ~~characterized in that~~wherein said component  
3 is a sealing washer, a gear, a piston, a part of a valve  
4 drive or a needle for an injection nozzle, or that it is  
5 toothed.

1           **Claim 4 (currently amended):** Tool as in claim 1,  
2 ~~characterized in that it~~wherein the tool is a forming  
3 tool ~~and in particular~~of an upper die, a bottom swage, a  
4 drawing die, an ejector core or a thread former.

1           **Claim 5 (currently amended):** Tool as in claim 1,  
2 ~~characterized in that it~~wherein the tool is an  
3 injection-molding tool for producing a molded plastic  
4 part or a data storage medium.

1           **Claim 6 (currently amended):** Tool as in claim 1,  
2 ~~characterized in that it~~wherein the tool features a CBN  
3 or Cermet base unit or that ~~[[it]]~~the tool is a CBN or  
4 Cermet (indexable tip) insert.

1           **Claim 7 (currently amended):** Work piece as in one

2 of the preceding claims, ~~characterized in that~~wherein the  
3  $(Al_yCr_{1-y})X$  film has a cubic crystal structure.

1 **Claim 8 (currently amended):** Work piece as in one  
2 of the ~~preceding claims, characterized in that the~~claims  
3 1-6, wherein a rate of wear of the  $(Al_yCr_{1-y})X$  film is less  
4 than or equal to  $1.5m^3m^{-1}N^{-1}10^{-15}$ .

1 **Claim 9 (currently amended):** Work piece as in one  
2 of the ~~preceding claims, characterized in that the~~claims  
3 1-6, wherein a Vickers pyramid hardness of the  $(Al_yCr_{1-y})X$   
4 film is 2300 to 3100.

1 **Claim 10 (currently amended):** Work piece as in one  
2 of the ~~preceding claims, characterized in that the~~claims  
3 1-6, wherein a layer structure of the  $(Al_yCr_{1-y})X$  film is  
4 microcrystalline with an average grain size of 20 to 120  
5 nm.

1 **Claim 11 (currently amended):** Work piece as in one  
2 of the ~~preceding claims, characterized in that~~claims 1-6,  
3 wherein a bonding layer is applied between the work piece  
4 and the  $(Al_yCr_{1-y})X$  film.

1           **Claim 12 (currently amended):**    Work piece as in  
2    claim 11, ~~characterized in that~~wherein said bonding layer  
3    encompasses at least one of the metals of group IV, V or  
4    subgroup VI, or aluminum.

1           **Claim 13 (currently amended):**    Work piece as in  
2    claim 11 ~~or 12, characterized in that~~wherein said bonding  
3    layer includes at least one nitride, carbide or  
4    carbonitride of one or several metals of subgroup IV, V  
5    or VI.

1           **Claim 14 (currently amended):**    Work piece as in ~~one~~  
2    ~~of the preceding claims, characterized in that the~~  
3    ~~minimum of~~claim 11, wherein at least one  $(Al_yCr_{1-y})X$  film  
4    is additionally coated with a slip layer.

1           **Claim 15 (currently amended):**    Work piece as in  
2    claim 14, ~~characterized in that~~wherein said slip layer  
3    encompasses a carbide of at least one metal with  
4    dispersed carbon, MeC/C, a diamond-like carbon layer, a  
5    Si- or metallic diamond-like carbon layer, a  $MoS_x$ , a  $WS_x$   
6    or a titanium-containing  $MoS_x$  or  $MoW_x$  layer.

1           **Claim 16 (currently amended):**    PVD process for

2 depositing at least one  $(Al_yCr_{1-y})X$  film on a work piece,  
3 where  $X = N, C, B, CN, BN, CBN, NO, CO, BO, CNO, BNO,$   
4  $CBNO$  and  $0.2 \leq y < 0.7$ , ~~whereby comprising the steps of~~  
5 installing at least one work piece in a vacuum coating  
6 system with at least one  $Al_zCr_{1-z}$  target, where  
7 ~~[[0,25]]~~  $0.25 \leq z < 0.75$ , ~~at least one work piece is~~  
8 ~~installed and operating~~ said system ~~is operated~~ at a  
9 pressure of 0.5 to 8 Pa with the addition of a nitrogen-,  
10 carbon- boron- or oxygen-containing reactive gas and ~~the~~  
11 ~~application~~ applying on the work piece of a substrate  
12 voltage of between -3 and -150V, as an arc or sputtering  
13 ~~source in such fashion that,~~ wherein the constituent  
14 composition within the said ~~minimum of~~ at least one  
15  $(Al_yCr_{1-y})X$  film is either essentially constant or varies  
16 either continuously or in steps over the thickness of the  
17 film.

1 **Claim 17 (currently amended):** PVD process as in  
2 claim 16, ~~characterized in that~~ wherein  $X = N$  and the  
3 reactive gas is nitrogen or oxygen.

1 **Claim 18 (currently amended):** PVD process as in  
2 ~~claims 16 and 17, characterized in that~~ claim 16 or 17,  
3 wherein the substrate voltage is pulsed.

1           **Claim 19 (currently amended):**   PVD process as in  
2   ~~claims 16 to 18, characterized in that~~claim 16 or 17,  
3   wherein the  $\text{Al}_z\text{Cr}_{1-z}$  target is a powder-metallurgically  
4   produced target.

1           **Claim 20 (currently amended):**   PVD process as in  
2   claim 19, ~~characterized by the use of a target~~wherein the  
3   target is produced by cold-pressing starting material in  
4   powder form with repeated subsequent reshaping, ~~for~~  
5   ~~instance in a forge,~~ at temperatures under  $660^\circ\text{C}$ ,  
6   densification by fluxing and cold fusion, and  
7   transformation into its final state with a theoretical  
8   density at about 96 to 100%.

1           **Claim 21 (currently amended):**   Process for machining  
2   a material, ~~characterized in that it~~wherein the process  
3   involves the use of a tool per claim 1.

1           **Claim 22 (currently amended):**   Process as in claim  
2   21, ~~characterized in that~~wherein the machining is  
3   performed without the addition of lubricants or cooling  
4   agents.

1           **Claim 23 (currently amended):** Process as in ~~claims~~  
2       ~~21 and 22, characterized in that~~claim 21 or 22, wherein  
3       the tool is a hard-metal or HSS hob (cutter) and the  
4       cutting speed is 60 to 450 m/min.

1           **Claim 24 (currently amended):** Process as in ~~claims~~  
2       ~~21 and 22, characterized in that~~claim 21 or 22, wherein  
3       the tool is an end-milling, (spherical-head)  
4       ball-nose-mill or a roughing cutter.